

## REMARKS

### I. Status Summary

With this Amendment, claims 1-56 are pending in the present application. Claims 1, 18, 28, 38 and 49 have been amended. Applicants respectfully submit that the arguments made below put the application in condition for allowance or in better condition for appeal. Reconsideration of the application based on the remarks set forth below is respectfully requested.

### II. Claim Rejection under 35 U.S.C. § 102(b)

Claims 1, 38, and 42 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,154,614 to Matsuoka, et al. (hereinafter, "Matsuoka").

#### II. A. Independent Claims 1 and 38 Rejected Under 35 U.S.C. § 102(b)

Independent claim 1 recites an apparatus for use in instructing a user to communicate in Braille including a frame and a plurality of latching tactile switching devices mounted to the frame. Each tactile switching device is configured to be depressible by the user between a raised position which emulates a raised Braille dot and a lowered position which emulates the absence of a Braille dot. As amended, independent claim 1 recites that each tactile switching device is configured to stay in the raised position or the lowered position until depressed by the user again. The electronic circuitry communicates with the switching devices for producing an auditory output for emission by the audio output device in response to a combination

of switching devices selectively activated by a user. Further, the auditory output corresponds to the Braille character represented by the combination of activated switching devices.

Independent claim 38 recites a method for instructing a person in communicating in Braille. The method recites providing a plurality of latching tactile switching devices, each switching device configured to be actuatable between a raised position that can be sensed by a person as a raised Braille dot and lowered position that can be sensed as the absence of a Braille dot. Claim 38 has been amended to recite that the method includes determining a Braille character to be represented by the tactile switching devices. Also, claim 38 has been amended to recite that the method includes actuating the tactile switching devices so that the tactile switching devices that correspond to the Braille dots of the determined Braille character are in a raised position. The method further recites that, in response to a combination of switching devices actuated into respective raised positions, providing an auditory output for the person corresponding to the Braille character represented by the combination of switching devices actuated.

## II. B. Arguments Against the Rejection of the Claims based on 35 U.S.C. § 102(b)

Applicants respectfully submit that Matsuoka does not anticipate independent claims 1 or 38 or the claims that depend therefrom. In particular, Matsuoka does not disclose all the features of independent claims 1 and 38.

In the Office action dated May 31, 2007, the Examiner asserted that the apparatus and method recited in the respective independent claims 1 and 38 of the

present application were basically the same as the device and associated process of Matsuoka because "both the Matsuoka et al.'s and the applicant's Braille writers enable users to depress each tactile switching device to emulate patterns of raised Braille dots and output information audibly." (See Office Action dated May 31, 2007, page 3.) First, unlike Matsuoka, the apparatus and method for the respective independent claims 1 and 38 of the present application do not relate to a Braille writer. Second and more importantly, the apparatus of claim 1 as recited is configured to operate and the method of claim 38 as recited is performed in the exact opposite manner of the Matsuoka Braille writer. Thereby, the Braille writer of Matsuoka cannot under United States Patent law anticipate claims 1 and 38.

As described in detail in Amendment A date February 1, 2007, Matsuoka discloses a Braille writer electronic apparatus that has key input means corresponding to each element of a predetermined Braille pattern and stores and inputs or outputs information which is input from the key input means. To form a Braille pattern, each input key **2a** to **2f** that represents a raised Braille dot in the Braille pattern is depressed downward to a lower position. Thus, when representing a Braille character, the input keys are not configured to be raised to emulate a raised Braille dot but rather configured to be depressed to a lower position in order to create a signal for input into the electronic apparatus of Matsuoka to represent an associated raised Braille dot.

Matsuoka also teaches that once the key is depressed to represent a Braille point or dot, the button automatically raises to its resting position after the user

releases the input key. Therefore, after pushing the input key and removing the user's finger from that input key, the input key does not remain in a position that would emulate a Braille character.

"A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The electronic apparatus of Matsuoka does not have each input key configured to be depressible by the user between a raised position which emulates a raised Braille dot and a lowered position which emulates the absence of a Braille dot as recited in claims 1 and 38. In fact, the electronic apparatus of Matsuoka is configured to operate in a totally different manner. In Matsuoka, each input key that represents a Braille dot has to, at least momentarily, reside in a lower position to be recognized as a raised Braille dot while the other input keys reside in a raised resting position. Thus, at the point of recognition, the electronic apparatus of Matsuoka is configured such that the input keys that represent a Braille dot are in a lowered position and the buttons that represent an absence of a Braille dot are in a raised resting position. This configuration is the exact opposite of the configuration of the apparatus of claim 1 and operates in the exact opposite manner from the method of claim 38 of the present application. Further, Matuoska does not disclose a latching tactile switching device as recited in claims 1 and 38 of the present application and the input keys of Matsuoka are not configured to stay in the raised position or the lowered position until depressed by the user again as recited in claim 1 of the present

application. Therefore, under United States law, Matsuoka does not anticipate claims 1 and 38.

For the above reasons, Matsuoka does not anticipate independent claims 1 and 38. Since claim 42 depends from claim 38, Matsuoka further does not anticipate claim 42.

Accordingly, applicants respectfully submit the rejections of claims 1, 38, and 42 under 35 U.S.C. § 102(b) should be withdrawn.

### III. Claim Rejection under 35 U.S.C. § 103(a)

Claims 2-4, 18, 28, 39-41, 49, and 50 stand rejection under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka et al. in view of art discussed in applicants' application. Claims 5-8, 10-15, 17, 19, 20, 22-25, 27, 29-31, 33, 34, 36, 37, 43-46, and 48 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of U.S. Patent No. 3,883,146 to Johnson et al. (hereinafter, "Johnson").

Claims 9, 16, 21, 26, 32, and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of Johnson and further in view of U.S. Patent No. 6,022,220 to Haugen (hereinafter, "Haugen"). Claim 47 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of Haugen.

Claims 51-54 and 56 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Matsuoka in view of art discussed within applicants' application and further in view of Johnson. Claim 55 stands rejected under 35 U.S.C. § 103(a)

as being unpatentable over Matsuoka in view of art discussed within applicants' application and further in view of Haugen.

III. A. Summary of Independent Claims 18, 28, and 49 Rejected Under 35 U.S.C.

§ 103(a)

Independent claim 18 recites an apparatus for use in instructing a user to communicate in Braille. The apparatus includes a frame and a plurality of latching switching devices for selective activation by a user to represent one or more raised Braille dots. The apparatus includes a pair of arms pivotably coupled to the frame. Each arm supports at least three switching devices. The pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 x 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in 1 x 6 row of Braille dots for emulating a Braille writer. Claim 18 has been amended to recite that each latching switching device is configured to be depressible by the user between a raised position raised above the arm on which the respective switching device resides to emulate a raised Braille dot and a lowered position about flush with the arm on which the respective switching device resides to emulate the absence of a Braille dot. The apparatus further includes electronic circuitry supported by the frame and comprising an audio output device. The electronic circuitry communicates with the switching devices for producing an auditory output for emission by the audio output device in response to a combination of switching devices selectively activated by a user. The auditory output

corresponds to the Braille character represented by the combination of activated switching devices.

Independent claim 28 recites an apparatus for use in instructing a user to communicate in Braille. The apparatus includes a frame and a plurality of tactile switching devices. Each tactile switching device is configured to be depressible between a lowered position and a raised position. Claim 28 has been amended to recite that each tactile switching device is also configured to stay in the raised position or the lowered position until depressed by the user again. The apparatus includes a pair of arms pivotably coupled to the frame. Each arm supports at least three latching tactile switching devices wherein, for the raised position of each switching device, at least a portion of the switching device is raised above an upper surface of its corresponding arm for emulating a raised Braille dot. The pair of arms are rotatable along the frame between a first position at which the arms are generally in parallel relation and the switching devices are arranged in a 3 x 2 array of Braille dots for emulating a Braille cell, and a second position at which the arms are pivoted outwardly from each other in 1 x 6 row of Braille dots for emulating a Braille writer. The apparatus further includes an electronic circuitry supported by the frame and comprising an audio output device. The electronic circuitry communicates with the switching devices for producing an auditory output for emission by the audio output device in response to a combination of switching devices selectively activated by a user. The auditory output corresponds to the Braille character represented by the combination of activated switching devices.

Independent claim 49 recites a method for instructing a person in communicating in Braille. The method, as amended, includes a step of providing a pair of arms with each arm supporting at least three latching tactile switching devices with each switching device being depressible between a raised position raised above the arm on which the respective switching device resides and a lowered position about flush with the arm on which the respective switching device resides. As amended, claim 49 recites that the switching devices can be selectively depressed between the raised positions and the lowered positions for emulating patterns of raised Braille dots and the switching devices in the raised positions can be sensed by touch as Braille dots. The method also includes a step of rotating a pair of arms between a first position in which the arms are generally in parallel relation and the switching devices are arranged in a 3 x 2 array of Braille dots for emulating a Braille cell and a second position in which the arms are pivoted outwardly from each other in a 1 x 6 row of Braille dots for emulating a Braille writer. Claim 49 has been amended to recite that the method includes depressing the tactile switching devices so that the tactile switching devices represent a Braille character with the tactile switching devices that correspond to the Braille dots of the Braille character being in the raised positions and the other tactile switching devices being in the lowered positions. The method further includes a step for providing an auditory output for the person corresponding to the Braille character represented by the combination of switching devices actuated in response to a combination of switching devices actuated.



III. B. Arguments Against the Rejections Under 35 U.S.C. § 103

If the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious. (See MPEP §2143, citing *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (CCPA 1959).) Further, if proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. (See MPEP §2143, citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984).)

Claims 2-37, 39-41 and 43-56 are rejected under 35 U.S.C. § 103(a) by some combination of Matsuoka in view of Johnson, Haugen, or the art discussed in the background section of the present application. Claims 2-17 depend from claim 1 and claims 39-41 and 43-47 depend from claim 38. Applicants respectfully submit that Matsuoka in view of any combination of Johnson, Haugen, or the art discussed in the background section of the present application does not render independent claims 1, 18, 28, 38, and 49 obvious. In particular, the combination and modification of the references in the manner suggested by the Examiner in the rejections under 35 U.S.C. § 103(a) listed above would change the principle of operation of the primary reference of Matsuoka and also render the primary reference of Matsuoka inoperable for its intended purpose. Therefore, the combination of Matsuoka with Johnson, Haugen, or the art discussed in the background section of the present application is improper and does not render obvious claims 1, 18, 28, 38 and 49.

As described above, Matsuoka is an electronic apparatus that serves as a Braille word processor or writer that can go back and generate a series of sounds that represent a binary number associated with the Braille character that a user has typed and wants to review. The user types a Braille character by depressing input keys that correspond to raised Braille dots within that Braille pattern at the same time while leaving the input keys that do not represent a dot within the Braille character in an undepressed raised position. The user does not depress any input keys that represent an absence of raised Braille dot. Thus, at the point of recognition, the electronic apparatus of Matsuoka is configured such that the input keys that represent a Braille dot are in a lowered position and the input keys that represent an absence of a Braille dot are in a raised resting position. Such a configuration is important in Matsuoka because to type a Braille character on a Braille writer requires that the input keys representing a Braille dot need to be pushed.

To change the input key configuration from input keys that need to be pushed to a lowered position to represent Braille dots of Braille characters in Matsuoka to input keys that may need to be pushed to reside in a raised position to represent Braille dots of a Braille character or may need to be pushed to reside in a lowered position to represent an absence of a Braille dot changes the principle of operation of Matsuoka. Such a change created by the suggested combinations of references would require a substantial reconstruction and redesign of the elements shown in Matsuoka as well as a change in the basic principle under which the Matsuoka construction was designed to operate.

Similarly, such combinations of references in the manner suggested by the Examiner would render the primary reference of Matsuoka inoperable for its intended purpose. As stated above, Matsuoka is used as a Braille writer that processes and stores what the user types. The Braille writer typing system requires that the input keys that represent a Braille character be pressed down at the same time similar to the depression of a character key on a typewriter. This requirement exists to facilitate the typing of Braille characters by blind people. Each input key is associated with a possible Braille dot within the Braille system's 3 x 2 array. Blind people associate and understand Braille characters based on which Braille dots are present within the Braille system's 3 x 2 array. Thus, the Braille writer typing system has been developed based on the recognition by the user of which dots are present and not by which dots are absent. By requiring the user to press any other input keys other than the ones that represent raised Braille dots when using the Braille writer typing system would be counterintuitive to the current Braille writer typing system. Thus, changing configuration of the input keys so that they are raised in a raised position to represent Braille dots and lowered in a lowered position to represent the absence of a Braille dot for each Braille character would render Matusoka inoperable for its intended purpose of providing an apparatus that employs the Braille writer typing system which blind people can use to type Braille.

For at least the reasons set forth above, independent claims 1, 18, 28, 38, and 49 or the claims that depend therefrom are not rendered obvious by Matsuoka in

view of any combination of Johnson, Haugen, or the art discussed in the background section of the present application.

Claims 2-17 depend from claim 1. Claims 19-27 depend from claim 18. Claims 29-37 depend from claim 28. Claims 39-48 depend from claim 28 and claims 50-56 depend from claim 49. Thus, applicants respectfully submit that claims 2-17, 19-27, 29-37, 39-48, and 50-56 are not rendered obvious by the cite of prior art. Accordingly, applicants respectfully submit that rejections of claims 2-37, 39-41, and 43-56 under 35 U.S.C. §103(a) should be withdrawn and the claims be allowed at this time.

#### CONCLUSION

In light of the above amendments and remarks, it is respectfully submitted that the present application is now in proper condition for allowance, and an early notice to such effect is earnestly solicited.

If any small matter should remain outstanding after the Patent Examiner has had an opportunity to review the above Remarks, the Patent Examiner is respectfully requested to telephone the undersigned patent attorney in order to resolve these matters and avoid the issuance of another Official Action.

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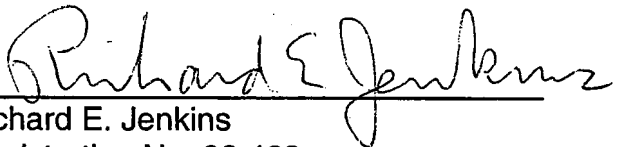
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Respectfully submitted,

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